Datasheet for ABIN7505453

Glycerol Kinase Protein (GK) (AA 2-502) (His tag)

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Overview

Quantity:	100 µg
Target:	Glycerol Kinase (GK)
Protein Characteristics:	AA 2-502
Origin:	E. coli
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This Glycerol Kinase protein is labelled with His tag.

Product Details

Sequence:	Thr2-Glu502
Characteristics:	A DNA sequence encoding the Escherichia coli Glycerol kinase (2T-502E) was expressed with a polyhistidine tag at the N-terminus and C-terminus.
Purity:	> 90 % as determined by reducing SDS-PAGE.
Biological Activity Comment:	Measured by its ability to transfer phosphate from ATP to glycerol. The specific activity is ≥ 200U/mg protein, as measured under the described conditions.

Target Details

Target:	Glycerol Kinase (GK)
Alternative Name:	Glycerol kinase (GK Products)

Target Details

Background:	Abbreviation: Glycerol kinase Target Synonym: GK,glpK Background: Glycerol kinase from?E. coli?(glpK) catalyzes the ATP-dependent phosphorylation of glycerol to produce?sn-glycerol-3-phosphate (G3P), the first and rate-limiting step in the utilization of glycerol. In the presence of glycerol, glpK is stimulated by interaction with the membrane-bound glycerol facilitator. In the presence of glucose, glpK activity is allosterically inhibited by fructose-1,6-bisphosphate (FBP) of the glycolytic pathway. Under physiological conditions, the enzyme is in an equilibrium between the active dimer and the inactive tetramer. FBP binds to and stabilizes the inactive form, therefore shifting the usage of glycerol metabolic pathway to glycolytic pathway. GlpK is a member of a superfamily of ATPases that includes actin, hexokinase and the heat shock protein hsc70. Although these proteins are dissimilar in amino acid sequence and function, they share similar tertiary folds and likely the same catalytic mechanism. The enzyme activity was measured using a phosphatase-coupled kinase assay.
Molecular Weight:	Calculated MW: 56.1 kDa Observed MW: 55-58 kDa
UniProt:	P0A6F3

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization.
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Expiry Date:	12 months